

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 March 2005 (17.03.2005)

PCT

(10) International Publication Number
WO 2005/024101 A1

(51) International Patent Classification⁷: **D01D 5/00**

(21) International Application Number:
PCT/CZ2004/000056

(22) International Filing Date:
8 September 2004 (08.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
PV 2003-2421 8 September 2003 (08.09.2003) CZ

(71) Applicant (for all designated States except US): **TECHNICKA UNIVERZITA V LIBERCI** [CZ/CZ]; Halkova 6, 461 17 Liberec (CZ).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **JIRSAK, Oldrich** [CZ/CZ]; Sramkova 151, 460 10 Liberec 20 (CZ). **SANETRNIK, Filip** [CZ/CZ]; Neklanova 814, 460 14 Liberec 14 (CZ). **LUKAS, David** [CZ/CZ]; Na Zizkove 853, 460 06 Liberec 6 (CZ). **KOTEK, Vaclav** [CZ/CZ];

Karla Capka 331/9, 460 05 Liberec 5 (CZ). **MARTINOVA, Lenka** [CZ/CZ]; Sosnova 18, 460 01 Liberec 15 (CZ). **CHALOUPEK, Jiri** [CZ/CZ]; Pincova 33, 400 11 Usti nad Labem (CZ).

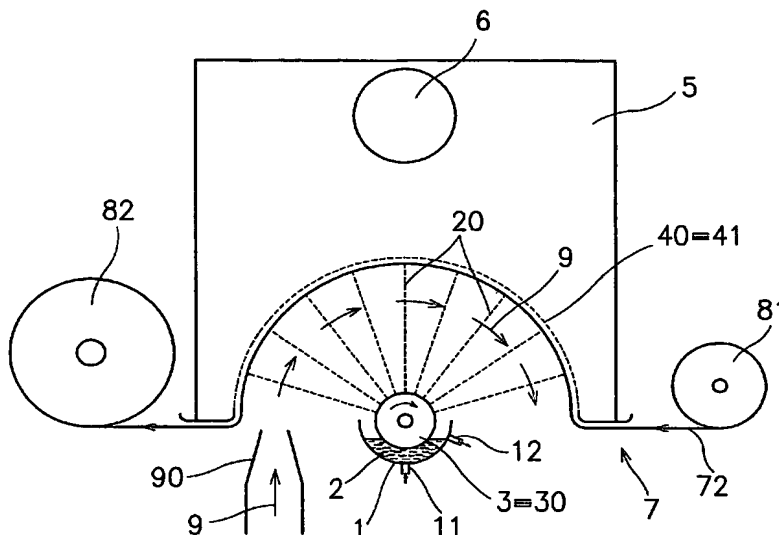
(74) Agent: **MUSIL, Dobroslav**; Patent Office, Cejl 38, 602 00 Brno (CZ).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

[Continued on next page]

(54) Title: A METHOD OF NANOFIBRES PRODUCTION FROM A POLYMER SOLUTION USING ELECTROSTATIC SPINNING AND A DEVICE FOR CARRYING OUT THE METHOD



(57) Abstract: The invention relates to a method of nanofibres production from a polymer solution using electrostatic spinning in an electric field created by a potential difference between a charged electrode and a counter electrode. The polymer solution (2) is for spinning supplied into the electric field using the surface of the rotating charged electrode (30), while on a part of the circumference of the charged electrode (30) near to the counter electrode (40) is a spinning surface created, by which is a high spinning capacity reached. Further the invention relates to a device for carrying out the method, where the charged electrode (30) is pivoted and by its (bottom) part of its circumference it is immersed in the polymer solution (2), while against the free part of the circumference of the charged electrode (30) is positioned the counter electrode (40).



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.